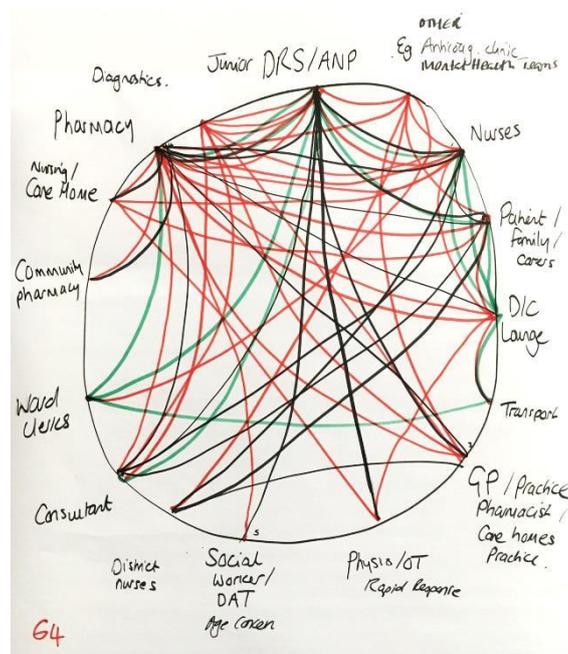


Improvement Toolkit

An alternative version of a spaghetti diagram is a **handoff map**. This tool works in a similar way to the spaghetti diagram but instead of tracking the spatial journey a process follows, it highlights the number of interactions with different people. This is particularly to help understand processes in primary care as it helps identify the number of people required in any particular process and the communication between each individual.

The example below is taken from the Safer Handover project, and highlights the number of people involved in the process of discharging a patient from hospital



How to use a spaghetti diagram

1. Decide what you are going to observe, e.g. a letter, staff or patient flow. You may decide to analyse these simultaneously by using different coloured lines to represent each journey
2. Involve people who are "in" the process in the drawing of the diagram – they will know the steps involved the most. Observe the process in action (you need to avoid the temptation to draw how things 'should' be done and focus on what really happens).
3. Prepare a floor plan of the area you are working with. Draw lines on it to show the flow of movement as you observe it
4. Discuss the diagram as a team to identify any areas with unnecessary movement
5. Assess the diagram to help redesign the process (for example, if every exam room had a certain piece of equipment, the GP would not need to fetch it from a different room) – this can act as a starting point for redrawing a new diagram to reflect the desired flow after changes have been made

Resources

Further information is available online from:

<https://improvement.nhs.uk/documents/2168/spaghetti-diagram.pdf>

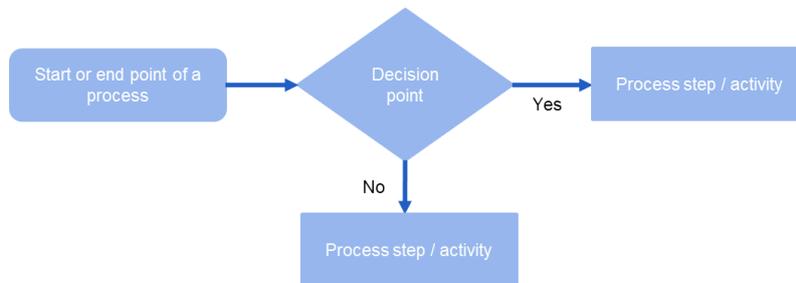
Process map

Process mapping enables you to clearly and simply record existing processes by creating a visual picture of how a pathway or process currently works, capturing the reality of the process by setting out the sequence of activities or decision points.

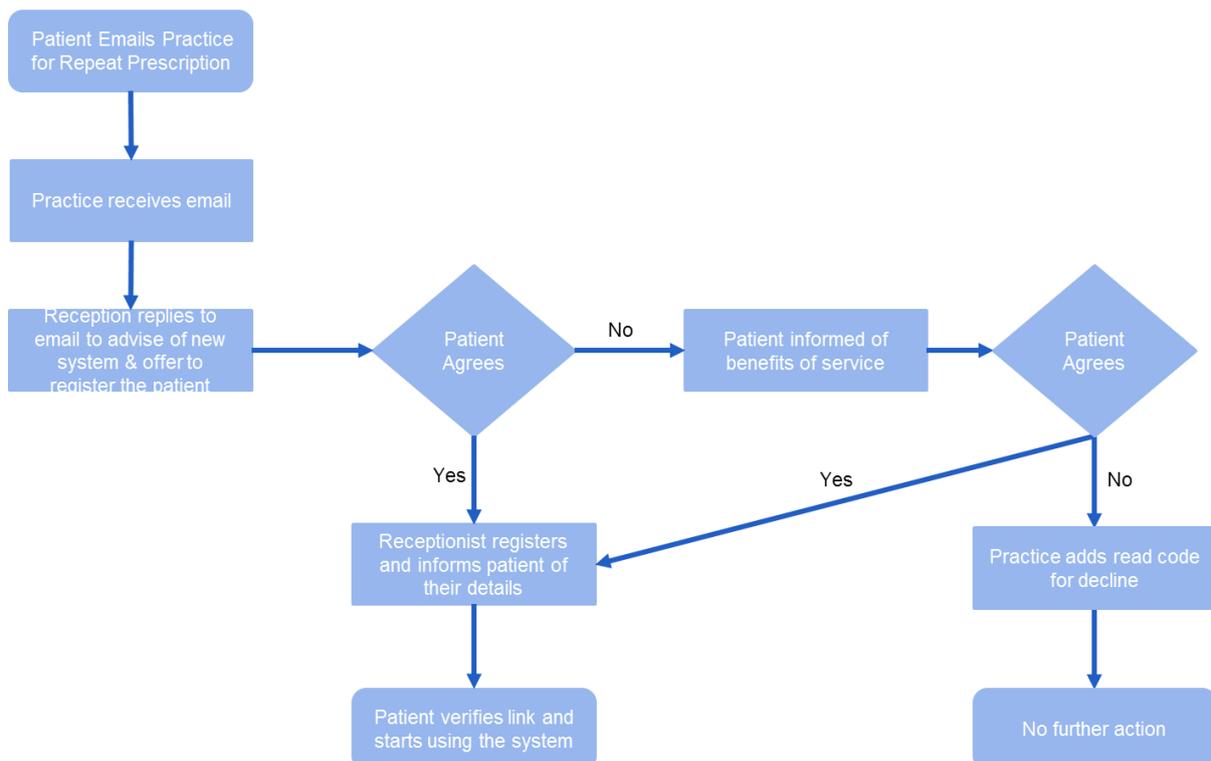
Making changes without truly understanding how a process is working, and why, can lead to costly mistakes and wasted efforts. Process mapping enables us to clearly define and understand the current processes in a visual form, identifying problem areas such as bottlenecks, capacity issues, delays or waste. Once identified, this knowledge provides a solid basis from which to develop solutions and introduce and plan new improved processes.

It is estimated that people working in organisations can waste 15-20% of their time by re-doing things that are wrong, chasing things without result, querying incomplete instructions and doing other people's jobs.

Common symbols are used in a process map:



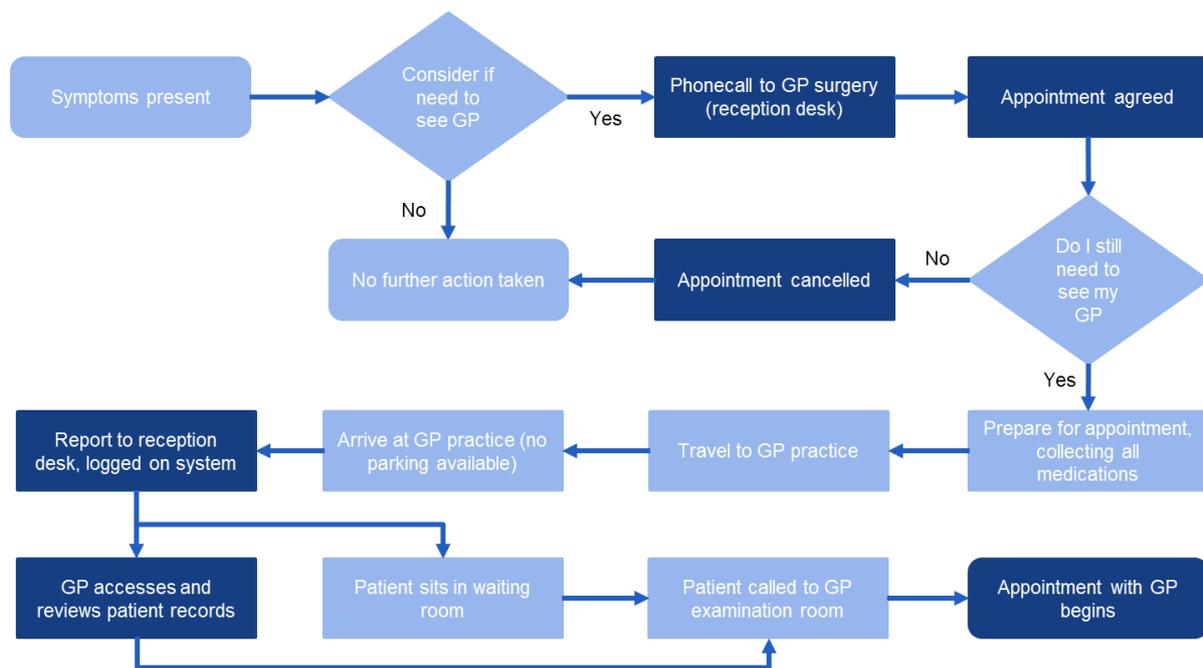
The below example highlights the process steps to register a patient on a new electronic prescription system.



Improvement Toolkit

A more advanced version of the process map is known as a **value map** or a **'touchpoint'** map. These have a more specific focus on the impact and involvement of each step on a particular customer, in healthcare this tends to be the patient, but may also be a specific healthcare professional. This is a useful tool as it enables a team to focus on the steps in a process which are seen to add value, and those which do not.

The example below demonstrates a touchpoint map for a patient appointment. Steps which involve the GP practice shown in the dark blue, touchpoints from the patient perspective are in light blue. It is clear from this example that the patient has many more interactions than initially considered in a straightforward process map, which may need to be taken into account when making changes to a process.



How to use a process map

1. Define your process, agreeing the start and end point of the process you are going to map. Some interventions or pathways can have multiple processes undertaken by different teams or departments so be sure to identify and define each separate process (e.g. patient requests appointment, fulfilment of prescription order, follow up actions may all be self-contained processes in themselves)
2. Get the right people involved, it is important to have all the people actually involved in the process present as they will have knowledge and insight for how things actually happen (you need to avoid the temptation to draw how things 'should' be done and focus on what really happens)
3. Get mapping! To start with, all you need is a wall and some post-it notes, this will enable you to easily add, remove or rearrange steps as you go
4. Explore the intricacies and details of each step – who does it? where is it done? how is it done? how long does it take?
5. You can then convert your 'post-it' process map into a printable hard copy, this is great for sharing with others at a later date, e.g. in a practice meeting

The 5 whys

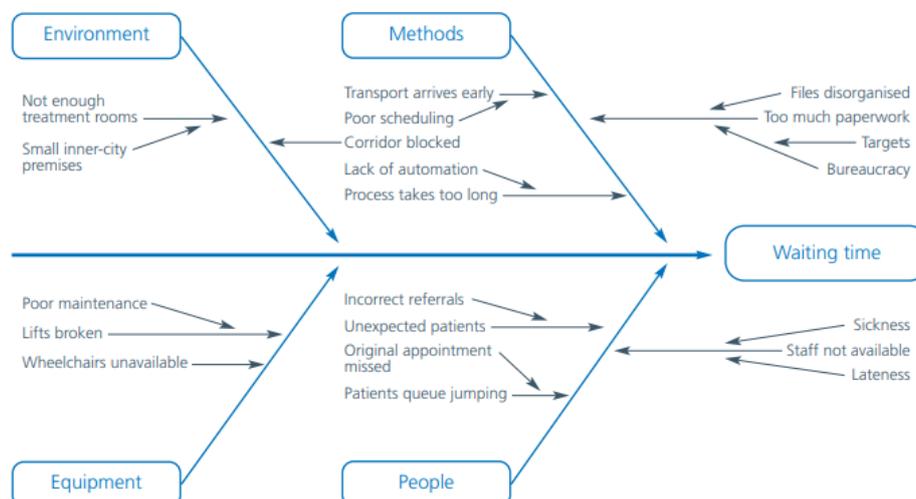
The 5 whys is an iterative interrogative technique used to explore the cause-and-effect relationships underlying a particular problem.

The primary goal of the technique is to determine the root cause of a defect or problem by repeating the question "Why?" based on the answer from the previous question. If you have ever been interrogated by a young child, you will know how effective repetitively asking the same question can be to get to the root of a situation!

Although this technique is called "5 Whys," you may find that you will need to ask the question fewer or more times than five before you find the issue related to a problem. One of the benefits of this tool is its simplicity.

Problem statement	The number of patients who have not turned up for appointments increased last month
<i>Why?</i>	The patients we spoke to who did not attend said they had forgotten they had booked the appointment or forgotten to cancel it
<i>Why?</i>	The text message reminder to confirm appointments has not been used last month
<i>Why?</i>	All text message reminders need to be approved by our practice manager who has been on leave
<i>Why?</i>	In the past patients complained that they were receiving too many text messages from us
Ideas for improvement	<ul style="list-style-type: none"> • Add a new approver to the system to cover when one is absent • Create a log of use of the text messaging system to track the number of messages sent out • Consider developing criteria for when it is appropriate to use the text messaging system so it is easier for practice team to know when the system should be used

For more complex problems, where there are multiple answers to the question "why?", it may be useful to categorise these into themes. These can then be visually displayed on a fishbone or Ishikawa diagram. The below example explores the problem of long waiting times within a hospital, four common themes are used to categorise responses.



How to use the 5 whys

1. Identify a specific situation, incident or problem that you want to explore in more detail, write down the specific problem (this helps focus on one thing)
2. Involve people who know the system you are exploring, this may require more people to get a whole overview of the causes
3. Ask “why” the problem happens and write down the answer
4. If the answer provided doesn’t identify the root cause of the problem that you are exploring, ask “why” again
5. Look back to step 4 until the team is in agreement that the problem’s root cause is identified (if in any doubt, just ask “why” again!)
6. Document the answers to show the link between each question, consider whether you need to convert this into a fishbone diagram (likely for more complicated problems where there may be multiple answers)
7. Collaboratively develop ideas for improvement based on the answers provided in the exercise

Resources

Further information is available online from:

<https://improvement.nhs.uk/documents/2093/cause-effect-fishbone.pdf>